

Applic. No.: 10/752,627

Amdt. Dated June 14, 2005

Reply to Office action of March 14, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

[[1]] 1 (currently amended). A measuring device comprising:

a measured value processor;

a sensor arrangement (2) to record for recording values, in particular angles and linear values, which produces said sensor arrangement producing at least two signals phase-

shifted to one another as a continuous function and in which these signals are, said signals being supplied to [[a]] said measured value processor, characterized in that;

an adjustment unit (7) is being connected in series to the said sensor arrangement (2), which adjusts the said adjustment unit adjusting amplitudes of the said phase-shifted signals (41, 42) to one another and/or produces producing from said phase-shifted signals (41, 42) signals which are out of phase by about 90°, which are said produced signals being then evaluated and outputted for further processing.

[[2]] 2 (currently amended). [[A]] The measuring device as

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~~recited in according to~~ claim 1, ~~characterized in that wherein~~
adjustment takes place at the times when the said phase-
shifted signals intersect ~~the~~ a common reference.

[[3]]] 3 (currently amended). [[A]] The measuring device as
~~recited in according to~~ claim 1, ~~characterized in that wherein~~
the said phase-shifted ~~sensor~~ signals have sinusoidal values.

[[4]]] 4 (currently amended). [[A]] The measuring device as
~~recited in according to~~ claim 1, ~~characterized in that wherein~~
for any phase-shifted values the 90° phase-shift results from
addition or subtraction of the values.

[[5]]] 5 (currently amended). [[A]] The measuring device as
~~recited in according to~~ claim [[1]] 2, ~~characterized in that~~
wherein the said common reference is created by producing the
an average value of at least two values phase-shifted by 90°.

[[6]]] 6 (currently amended). [[A]] The measuring device as
~~recited in according to~~ claim [[1]] 2, ~~characterized in that~~
wherein the said common reference is firmly set.

[[7]]] 7 (currently amended). [[A]] The measuring device as
~~recited in according to~~ claim 1, ~~characterized in that wherein~~
for non-symmetrical, calculated amplitudes of the particular

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values, ~~their~~ a reference thereof is suitably adjusted in the said adjustment unit.

[[8]]] 8 (currently amended). [[A]] The measuring device as ~~recited in according to~~ claim 1, ~~characterized in that wherein~~ the non-symmetrical, calculated distances of the intersections of the particular values with the a common reference are calculated by taking into account ~~their~~ an adjustment speed thereof and ~~their~~ a particular reference thereof is correspondingly adjusted in the said adjustment unit.

[[9]]] 9 (currently amended). [[A]] The measuring device as ~~recited in according to~~ claim 1, ~~characterized in that further~~ comprising an interpolator, the values resolved by [[an]] said interpolator ~~are~~ being calculated by taking into account their adjustment speed and, if they fluctuate from one another, their amplitudes ~~are~~ being adjusted accordingly.

[[10]]] 10 (currently amended). [[A]] The measuring device as ~~recited in according to~~ claim 1, ~~characterized in that wherein~~ the distances of the sensors from one another are chosen independently of the a scale division.

[[11]]] 11 (currently amended). [[A]] The measuring device as ~~recited in according to~~ claim 1, ~~characterized in that wherein~~

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the same measuring device is used for varying scale divisions.

[[12]]] 12 (currently amended). [[A]] The measuring device as recited in according to claim 1, characterized in that wherein two values phase-shifted by 90° and an additional value phase-shifted by 180° are created from the said phase-shifted signals and used for evaluation.

[[13]]] 13 (currently amended). [[A]] The measuring device as recited in according to claim 1, characterized in that wherein the said adjustment unit (7) and preferably also the whole electronics unit (8) including the sensor arrangement (2) are is located on an ASIC equipped with fixed hardware functions for an integrated or mounted encoder (1, 200).

14 (new). The measuring device according to claim 1, wherein said sensor arrangement is for recording angles and linear values.

15 (new). The measuring device according to claim 1, wherein a whole electronics unit including said sensor arrangement is located on an ASIC equipped with fixed hardware functions for an integrated or mounted encoder.